

Appl. No. 09/927,206
Amdt. Dated . Jan. 6, 2004
Reply to Office Action of October 6, 2003

Listing of Claims

Claim 1 (currently amended): A fiber optic polarizer comprising:
a chuck defining a groove in a face along a lengthwise direction thereof;
a single mode fiber installed on the face around one end of said groove;
a polarization-maintaining fiber installed on the face around the other end of
said groove; ~~and~~

a polarization beamsplitter disposed between said single mode fiber and said
polarization-maintaining fiber; and

a box hermetically enclosing the chuck and the polarization beamsplitter with
portions of the single mode fiber and polarization-maintaining fiber exposed to an
exterior; wherein

the polarization beamsplitter is positioned to respectively align with the single
mode fiber and the polarization-maintaining fiber at two opposite ends thereof to
allow unpolarized light from the single mode fiber to enter the polarization
beamsplitter at one end thereof and an o-ray of a polarized light to leave the
polarization beamsplitter toward the polarization-maintaining fiber.

Claim 2 (original): The polarizer as defined in claim 1, wherein the said
polarization beamsplitter is fixed to a wafer above the chuck.

Claim 3 (cancelled)

Claim 4 (original): The polarization as defined in claim 1, wherein said
groove is V-shaped, and both the single mode fiber and the polarization-
maintaining fiber are fixed thereto.

Claim 5 (currently amended) A method of polarizing an unpolarized light,
comprising the steps of:

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providing a box enclosing a chuck with a through V-groove along a lengthwise direction thereof, and a wafer above said check;

installing a single mode fiber in said V-groove around one end thereof;

installing a polarization-maintaining fiber in said V-groove around the other end thereof;

fixing a polarization beamsplitter to the wafer, and between and in alignment with said single mode fiber and said polarization-maintaining fiber; and

having the unpolarized light enter said box via said single mode fiber and through said polarization beamsplitter, and having only an o-ray of a polarized light leave said box via said polarization-maintaining fiber.